SIGNON

Sign Language Translation Mobile Application and Open Communications Framework

Deliverable 6.3: Second Annual Report on Communication and Dissemination Activities

Project Information
Project Number: 101017255
Project Title: SignON: Sign Language Translation Mobile Application and Open Communications Framework
Funding Scheme: H2020 ICT-57-2020
Project Start Date: January 1st 2021

Deliverable Information
Title: Deliverable 6.3: Second Annual Report on Communication and Dissemination Activities
Work Package: WP6 - Communication, Dissemination and Exploitation
Lead beneficiary: DCU
Due Date: 31/12/2022
Revision Number: V1.0
Authors: Jorn Rijckaert (VGTC), Aoife Brady (DCU)
Dissemination Level: Public
Deliverable Type: Report

Overview: This document gives an overview of the communication and dissemination activities in the SignON project to date.

Revision History

Version #	Implemented by	Revision Date	Description of changes
V0.1	Jorn Rijckaert	30/11/2022	First draft
V1.0	Jorn Rijckaert	12/12/2022	Final version; after implementing comments from reviewers

The SignON project has received funding from the European Union's Horizon 2020 Programme under Grant Agreement No. 101017255. The views and conclusions contained here are those of the authors and should not be interpreted as necessarily representing the official policies or endorsements, either expressed or implied, of the SignON project or the European Commission. The European Commission is not liable for any use that may be made of the information contained therein.

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Approval Procedure

Version #	Deliverable Name	Approved by	Institution	Approval Date
V0.1	D6.3	Aoife Brady	DCU	07/12/2022
V0.1	D6.3	Marco Giovanelli	FINCONS	07/12/2022
V0.1	D6.3	Gorka Labaka	UPV/EHU	05/12/2022
V0.1	D6.3	John O'Flaherty	MAC	30/11/2022
V0.1	D6.3	Horacio Saggion	UPF	01/12/2022

V0.1	D6.3	Karim Dahdah	VRT	30/11/2022
V0.1	D6.3	Mathieu De Coster	UGent	19/12/2022
V0.1	D6.3	Hannes De Durpel	VGTC	12/12/2022
V0.1	D6.3	Ellen Rushe	NUID UCD	09/12/2022
V0.1	D6.3	Henk van den Heuvel	RU	30/11/2022
V0.1	D6.3	Catia Cucchiarini	TaalUnie (NTU)	30/11/2022
V0.1	D6.3	Myriam Vermeerbergen	KU Leuven	09/12/2022
V0.1	D6.3	Rehana Omardeen	EUD	01/12/2022
V0.1	D6.3	Mirella De Sisto Dimitar Shterionov	TiU	02/12/2022 08/12/2022 18/12/2022
v0.1	D6.3	Lorraine Leeson	TCD	12/12/2022

Acronyms

The following table provides definitions for acronyms and terms relevant to this document.

Acronym	Definition
DHH	Deaf and Hard of Hearing
WP	Work Package
SO	Strategic Objective
OO	Operational Objective

Table of Contents

1. Introduction

The SignON project targets three primary groups of users: deaf, hard-of-hearing and hearing people. Historically, there has been a gap between these user communities because of lack of communication and lack of collaboration. In particular, we note that previous funded technical projects have not addressed the actual requirements of these user groups, especially those of deaf and hard-of-hearing people, and have not involved appropriate partners from these communities. To narrow this gap, it is very important to ensure active, continued engagement of DHH communities in the development of the project. Communication and dissemination activities play an essential role for keeping these user communities well informed and their expectations realistic, it also is a facilitator for the co-creation strategy, which we have given very focused attention to within the SignON consortium. In deliverable

D6.1 "SignON Communication and Dissemination Plan", the main focus has been on a publicity-oriented approach of communication in which informing, explaining, motivating and 'selling our idea' are key. Four main strategic objectives (SOs) were drawn up for the three project years:

- SO1: Increase visibility of the SignON project
- SO2: Disseminate information about and results of the SignON project
- SO3: Raise positive attitudes about and foster engagement with SignON
- SO4: Align visions between project partners internally

The 'PDCA' principle (Plan, Do, Check and Adjust) was used to shape our communication and dissemination plan (D6.1) which was applied in the second project year and will be in the third and final project year. Therefore, the "target groups" and "communication strategies and tools" sections included below remain unchanged from previous deliverables (D6.1 and D6.2). They provide an important basis and guidance for describing and evaluating our implemented actions and for planning (new) objectives and actions for the upcoming project year.

2. Project Context

The SignON project aims to develop a mobile application that will translate between different European signed and spoken languages. The application, running on a standard mobile device, will interact with a cloud-based distributed framework dedicated to the computationally heavy tasks. The application and the framework are being designed through a co-creation approach where deaf, hard-of-hearing and hearing users work together with SignON researchers and engineers to build a solution that suits all project target users. Furthermore, it is being built for easy adaptability to other languages (signed and spoken) and modalities. Ultimately, the application aims to promote the equitable exchange of information between all European citizens.

The translation process involves three major steps which need to be clearly communicated with the various research, industry and user communities:

- Recognition of the input message: spoken messages will be transmitted as an audio stream, signed messages will be transmitted as a video stream and text messages simply as text. The audio and/or video will be processed accordingly for a suitable intermediate representation to be recognised.

- Translation from one language into another via an intermediate representation: symbolic and embedding based representations will be developed to facilitate the translation of (recognised) messages from one language (signed or spoken) to another.
- Output message synthesis: based on the output from the previous step, an output message will be generated in the necessary modality - audio via text to speech; signed message via a 3D avatar and written text. .

In the SWOT summary in D6.1, Communication and Dissemination Plan, the strengths, weaknesses, opportunities and threats for the SignON project were listed. This analysis serves as a starting point for drawing up a communication strategy and objectives. However, this SWOT analysis was based on earlier findings by VGTC from previous projects similar to SignON. It is therefore not an in-depth exploration study and relied on initial findings from Task 1.1 ("Case Studies and Evidence Analysis"). Nevertheless, experiences in the first and second project years and results of our co-creation events indicated that the initial findings from the SWOT analysis remain unchanged.

Although the objectives of the SignON project are very promising, at the same time we want to be realistic. From our co-creation events with DHH communities, technical challenges and internal considerations, we have learned that good and transparent communication on expectations about the sign language technology from both sides is very important. Expectation management is a very significant part of our work and will continue to be even more important across the remainder of the SignON project. Contrary to what we indicated in previous deliverables D6.1 and D6.2, besides resistance from the deaf community, there are also positive (high) expectations. One important point remains unchanged: in our communication we still need to make clear that an application like SignON does not intend to replace sign language interpreting nor to be imposed on DHH as the only form of communication, but that it contributes to a repertoire of different communication methods and language choices of DHH.

3. Target Groups

The target groups of the project are not homogeneous, yet different target groups can be clustered based on more or less the same characteristics. The communication plan includes communications tailored to these different target groups. The table below lists various target groups to whom the SignON

communication is addressed. It is copied from previous deliverables, with some changes in wording (see last column)

Target group	Importance of the target group	What messages should we convey?
EXTERNAL		
DEAF SIGNERS, mostly members of European deaf communities, who identify as a linguistic and cultural minority group and who use a sign language as their primary or preferred way of communicating.	Primary	The overall aim of this project is to provide an application that will contribute to a repertoire of different communication possibilities between signers and non-signers. SignON initially will provide limited services (will not work perfectly in all use-cases and scenarios) but will eventually grow to become a useful communication option between signers and non-signers.
ORGANISATIONS AND REPRESENTATIVES FOR DEAF PEOPLE AND SIGN LANGUAGES, including professionals and experts.	Primary	
DEAF AND HARD OF HEARING PEOPLE WHO ARE NON-SIGNERS[1], and do not necessarily identify themselves as members of a deaf community. They use a verbal language as their primary and preferred way of communicating.	Primary	The SignON application is flexible, scalable and adaptable (including personalisable) and provides multilingual translation via different input and output modes; it is not only a 'sign language app'.
HEARING PEOPLE with a connection to deaf and hard-of-hearing people and sign language(s). Involves hearing family, colleagues or relatives of deaf people, etc.	Primary	
SIGN LANGUAGE INTERPRETERS (both deaf and hearing) and their organisations.	Secondary	The SignON service is not a replacement of professional interpreters, but a tool to co-exist with them and facilitate the communication between deaf, hard of hearing and hearing people in low-impact situations where interpreters are not available. It is

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[1] In most of the cases this concerns people that have become deaf (e.g. old age, accidents, sickness, etc.), deaf people that were not exposed to nor used sign languages since birth, or deaf people with cochlear implants that did/do not have the need to use sign language and can deal with verbal language, etc.

		important to note that we only work with data from people and from interpreters with their consent.
SCIENTIFIC COMMUNITY, SISTER EU PROJECTS, REGULATORS, POLICY MAKERS, CLIENTS AND INVESTORS: people with a scientific, political or economic link to this project, in a wide range of domains.	Secondary	The SignON project will provide new data and knowledge important to the advancement of the State of the Art; we will stress the importance of the United Nations' Convention on the Rights of Persons with Disabilities and how this project fits in there.
INTERNAL		
CONSORTIUM PROJECT PARTNERS including the hearing researchers and the deaf representatives and organisations for the deaf people and sign languages.	Tertiary	The SignON project is still a research project and is still open to dialogue in which all views and concerns can be expressed.

4. Communication Strategies and Tools

The communication strategies were chosen, and described in detail in D6.1 (SignON Communication and Dissemination Plan) to increase the visibility of the project (SO1), in order to inform the target audiences about the project's progress and results (SO2), as well as to create a positive attitude towards it (SO3).

The following communication strategies are amongst those that we have used with our primary target groups:

- **Reputation strategy** is applied to the "doubters" and "naysayers" about the intentions of the project. In our communication, using this we strive to strengthen our reputation and to create the desired image among the target groups.

- **Positioning strategy** where we create the distinctive position of the SignON project in the minds and experiences of the target groups. In doing so, we are determining and strengthening the position of the project and its objectives and clarifying what place the SignON service can occupy with the primary target groups.

- **Word of mouth strategy** is a common communication strategy within close-knit deaf communities. The SignON project needs to acquire a distinctive identity within the primary

target groups, which will make people talk positively about the project and share our posts on social media. In this way SignON's brand awareness is raised and its image is strengthened. This will entice the target groups to behave more positively about the project.

- Finally, **participation strategy** is an important communication strategy to be applied to the target group of deaf people. This strategy is all about entering into a dialogue with the target groups, which should lead to cooperation. Through co-creation, co-design and co-development, solutions can be found to any issues in the project, by using the expertise and experiences of the primary target groups.

For other stakeholders such as representatives and organisations of deaf and sign languages (primary), sign language interpreters and their associations (secondary) and our tertiary target group of scientific community, regulators, policy makers, clients and investors, we have opted for a **network strategy** in which building long-term relationships is key. This is done by highlighting the project's own role in the network of relations and by paying attention to the interests of other stakeholders in the network.

For internal communication needs, we use a **family strategy** where stronger involvement is created between different project partners. The aim of this strategy is to find common focus and appreciation (SO4).

In our communication and dissemination plan, the following communication tools and quantitative objectives were chosen:

Channel	Target group	Measure	Project target
Project website	All	# site visits	6,000 during the project lifecycle
Social media	All	# followers	10,000 during the project lifecycle
Newsletter	All	#subscribers	200
Workshops by SignON	All	#attendees	3 workshops during the project lifecycle + 20-40 people per workshop

Internal workshops	Project partners	#attendees	Min. 3 workshops
Demonstrations	Deaf community and industry partners	#demonstrations	5 (over the lifecycle of the project)
Industry presentations and conferences	Industry partners and investors	#presentations	12 (4 per year)
Scientific publications	Scientific community	#submitted papers	Min. 31 submitted papers for the project lifecycle (15 for conferences, 10 for workshops and 6 for journals)
White papers	Policy makers	#papers	2
Media publications	All	#publications	10

5. Progress to date

In D6.1 (SignON Communication and Dissemination Plan), the SMART (Specific, Measurable, Achievable, Realistic and Timely) operational objectives (short-term goals) were formulated. In the next section, for each strategic objective (long-term goals), the activities (operational objectives), implemented or not, and concrete implementations to date are described.

SO1 - Increase visibility of the SignON project

In the first annual report on communication and dissemination activities (D6.2), only one operational objective from the original plan (D6.1) was not achieved in the first project year and thus deferred to the second project year. This is **OO1.2. "Sign name for SignON"**. As the SignON project had not yet become prominent enough in the daily conversations of deaf signers (probably due to the COVID-19 measures that often hinder meetings between deaf signers and with the deaf researchers in the consortium), a name sign for SignON was not yet found. However, we did think it was important for the project to have a name sign so that it could feel like part of the sign language communities.

At that time three name signs had emerged. One internally between deaf consortium members and two from outside the consortium. At VGTC's first physical workshop after the corona outbreak in Belgium, we gave the first ever presentation on SignON for sign language audiences, on 20 November 2021. Then a deaf signer proposed a name sign. That name sign is a compound of two signs, "SIGN" and "AVATAR". In spring 2022, a deaf signer from the UK also proposed a name sign based on SignON's logo.

On 24 May 2022, we launched a voting on social media looking for a name sign (see figure 1, https://vimeo.com/713262991/2efb3cfde0). We presented three options and asked people to vote for their favourite. The name sign with the most votes was then selected. Several consortium members recorded themselves signing that name sign and a compilation video of these recordings was edited and posted on social media on 27 June 2022 (see figure 2, https://vimeo.com/724437566).
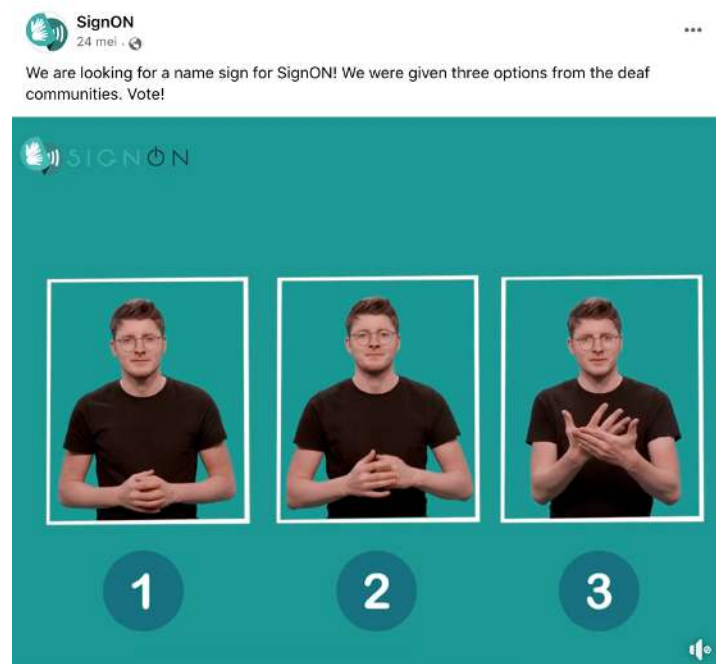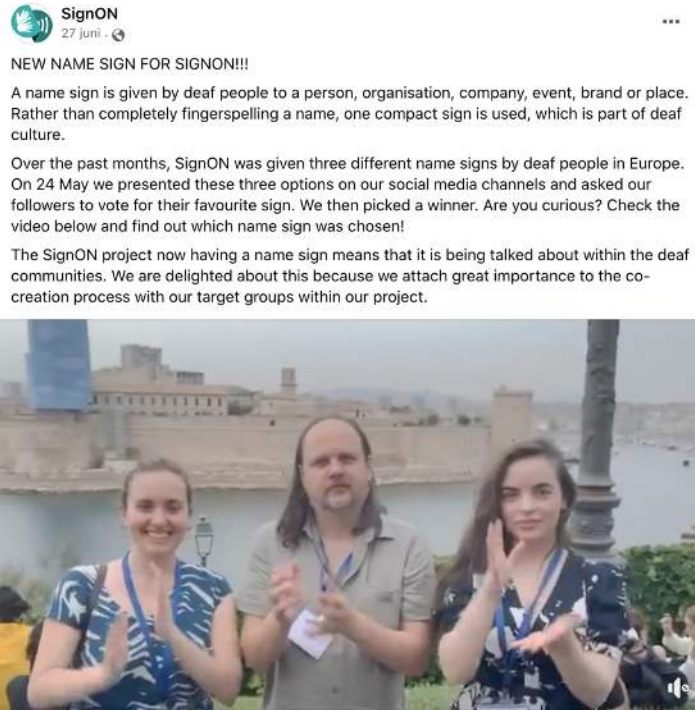

Figure 1

Figure 2. The new name sign of SignON. A LinkedIn post can be found here:
https://www.linkedin.com/posts/signon-eu-project_signon-new-name-sign-activity-6947168889667518464-k10l and a twit can
be found here: https://twitter.com/SignONEU/status/1541402980355870720

In the first annual report on communication and dissemination activities (D6.2), following the evaluation of the first project application, only one operational objective was added to the original plan (D6.1). As the project targets of our reach of social media channels were very ambitiously drafted at SignON's project application compared to reality, an operational objective "**OO1.8 - Increasing reach of social media channels**" was added in which we try to reach different target groups to increase the visibility of the SignON project (positioning strategy).

At the time of writing, 30th November 2022, we noted the progress status of number of visitors and followers on the SignON website and social media channels (note: the figures below at "first year" are dated 30 November 2021):

Channel	Measure	Project target	November 2021	November 2022
Project website	# site visits	6,000 during the project lifecycle	1326 users	3500 unique visitors 10600 page views
Facebook	# followers	10,000 during the project lifecycle	186 followers	564 followers

Twitter			180 followers	419 followers
LinkedIn			57 followers	113 followers
Instagram			72 followers	155 followers

SO2 - Disseminate information about and results of the SignON project

In this second strategic object a transparent communication (reputation strategy) is the method, mainly focused on increasing the target group knowledge and on providing target groups with a better understanding of the project's objectives and what their role is (positioning strategy).

In the first project year, the focus was mainly on building the website, where we made the structure and functioning of the project transparent, and setting up accessible information and communication about the project. In the second project year, we continued to update the following web pages:

- The FAQ page (https://signon-project.eu/about-signon/faqs/) was updated with seven new questions and answers (*OO2.4 - Create FAQ*):
  - o Could an avatarised version of the signed videos help with privacy issues?
  - o Do I need an internet connection to use the SignON application?
  - o Is the SignON application also accessible for deafblind people?
  - o Who can access the application now?
  - o Where can I download the SignON app?
  - o Are avatars personalisable?
  - o What technology do you use for Machine Translation?
- Who are we? (https://signon-project.eu/consortium/who-are-we/) with an updated list of newly joined and resigned SignON consortium members.
- Events (https://signon-project.eu/events/) with new events of the year 2022, organised by or related to the SignON project.
- Co-creation events (https://signon-project.eu/co-creation/co-creation-events/) is a new page with an overview of upcoming co-creation events.
- Latest news (https://signon-project.eu/latest-news/) with an updated overview of the latest news related to SignON.

- Press releases (https://signon-project.eu/news/press-releases/) is updated.
- Newsletter (https://signon-project.eu/news/newsletter/) where we added an archive of previous newsletters.
- Scientific Publications (https://signon-project.eu/publications/scientific-publications/) with an updated overview of our scientific publications.
- Public Deliverables (https://signon-project.eu/publications/public-deliverables/) with an updated overview of our public deliverables.
- Other publications (https://signon-project.eu/publications/other-publications/) was complemented by new videos from our SignON Forum and SignON Encyclopedia series.

In the first annual report on Communication and Dissemination Activities (D6.2), we planned to translate the announcement video of the SignON project (**OO2.1 Announcement of the SignON project**) in the five different national sign languages we work with, in order to achieve a greater reach of target groups (who are not proficient in English or International Sign). As more insight was gained into the wishes and needs of our target groups and the technical challenges in the autumn 2022, we decided to make a new video with updated information about the SignON project. This video was first made in International Sign (https://vimeo.com/764625550), with English subtitles, and then translated into five national sign languages: VGT, ISL, BSL, LSE and NGT.

In 2022, after our workshop in the European Parliament (see below) our project was mentioned in Silicon Republic (28th September 2022) with the title "AI research looks to bridge gaps between signed and spoken languages": https://www.siliconrepublic.com/machines/ai-deaf-signon-adapt (**OO2.7 Dissemination by (mainstream) media publications**).

Almost every two weeks (with summer break) we post news about the SignON project (**OO2.5 Communicating news and (intermediate) results about the project**) on our website and social media channels. News items are often about announcements of events, surveys, co-creation events, internal seminars etc. In 2022, four newsletters were sent out and we published one video for the "SignON Encyclopedia" which is specially dedicated to explaining different terminology and jargon about sign language technology. The video is longer than usual. In addition, a video interview (https://vimeo.com/693207746) was produced with Dr. Maartje De Meulder, Deaf scholar and currently a lecturer and senior researcher at the University of Applied Sciences Utrecht. She wrote and published

an article about the ethical and responsible development of sign language technologies. Another interview was recorded with Dimitar Shterionov, technical leader of the SignON project, explaining the technical challenges related to the SignON project. The publication of this video is planned for february 2022.

In the second year of the project, there were eighteen additional SignON scientific publications; to date, eight of these abstracts have been translated to International Sign and published on the website (*OO2.6 Dissemination of research data and specific publications*):

- Mirella De Sisto, Vincent Vandeghinste, Santiago Egea Gómez, Mathieu De Coster, Dimitar Shterionov and Horacio Saggion (2022). Challenges with Sign Language Datasets for Sign Language Recognition and Translation. Proceedings of the 13th International Conference on Language Resources and Evaluation (LREC). Marseille, France.

- Vincent Vandeghinste, Bob Van Dyck, Mathieu De Coster, Maud Goddefroy and Joni Dambre (2022). BeCoS corpus: Belgian Covid-19 Sign language corpus. A corpus for training Sign Language Recognition and Translation. Computational Linguistics in the Netherlands Journal. Vol. 12

- Vincent Vandeghinste and Tim Van de Cruys (2022). Voorgetrainde Grote Taalmodellen en Automatische Vertaling. Dixit. Tijdschrift voor Taaltechnologie.

- Dimitar Shterionov, Mirella De Sisto, Vincent Vandeghinste, Aoife Brady, Mathieu De Coster, Lorraine Leeson, Josep Blat, Frankie Picron, Marcello Paolo Scipioni, Aditya Parikh, Louis ten Bosch, John O'Flaherty, Joni Dambre, and Jorn Rijckaert (2022). Sign Language Translation: Ongoing Development, Challenges and Innovations in the SignON Project. In Proceedings of the 23rd Annual Conference of the European Association for Machine Translation, pages 325–326, Ghent, Belgium. European Association for Machine Translation.

- Matthieu De Coster and Joni Dambre (2022). Leveraging Frozen Pretrained Written Language Models for Neural Sign Language Translation. In Information volume 13. p. 220.

- Aditya Parikh, Louis ten Bosch, Henk van den Heuvel, Cristian Tejedor-García (2022). Design principles of an Automatic Speech Recognition functionality in a user-centric signed and spoken language translation system. In Computational Linguistics in the Netherlands Conference (CLIN32), TIlburg, the Netherlands.

- Ruth Holmes, Ellen Rushe, Frank Fowley, Anthony Ventresque (2022). Improving Signer Independent Sign Language Recognition for Low Resource Languages. In Proceedings of the 7th

International Workshop on Sign Language Translation and Avatar Technology: The Junction of the Visual and the Textual: Challenges and Perspectives (SLTAT 2022), pp. 45-52. Marseille, France.

- Rachel Moiselle and Lorraine Leeson (2022). Language Planning in Action: Depiction as a Driver of New Terminology in Irish Sign Language. In Proceedings of the 10th Workshop on the Representation and Processing of Sign Languages (sign-lang@LREC 2022), pages 139–143 Language Resources and Evaluation Conference (LREC 2022), Marseille, 20-25 June 2022.

- Mathias Müller, Sarah Ebling, Michèle Berger, Richard Bowden, Annelies Braffort, Necati Cihan Camgöz, Cristina España-Bonet Roman Grundkiewicz, Eleftherios Avramidis, Alessia Battisti, Zifan Jiang, Oscar Koller, Amit Moryossef, Regula Perrollaz, Sabine Reinhard, Annette Rios, Dimitar Shterionov, Sandra Sidler-Miserez, Katja Tissi, Davy Van Landuyt (2022). Findings of the First WMT Shared Task on Sign Language Translation (WMT-SLT22). In Proceedings of the Seventh Conference on Machine Translation (WMT), pages 744–772, Abu Dhabi, December 7–8, 2022.

- Vincent Vandeghinste, Mirella De Sisto, Dimitar Shterionov, Aoife Brady, Mathieu De Coster, Loraine Leeson, Josep Blat, Frankie Picron, Marcello Scipioni, Aditya Parikh, Louis Ten Bosch, John O'Flaherty, Joni Dambre, and Jorn Rijckaert (2022). Progress, Challenges and Innovations of the SignON Project. Proceedings of the Computational Linguistics in the Netherlands Conference (CLIN32).

- Egea Gómez, S., Chiruzzo, L., McGill, E., Saggion, H. (2022). Linguistically Enhanced Text to Sign Gloss Machine Translation. In: Rosso, P., Basile, V., Martínez, R., Métais, E., Meziane, F. (eds) Natural Language Processing and Information Systems. NLDB 2022. Lecture Notes in Computer Science, vol 13286. Springer, Cham.

- Coppin, J., De Coster, M., & Dambre, J. (2022). Attention analysis of a sign language recognition task on the AUTSL dataset. Computational Linguistics in the Netherlands (CLIN 32), Abstracts. Presented at the 32nd Meeting of Computational Linguistics in The Netherlands (CLIN 32), Tilburg, the Netherlands.

- Ineke Schuurman, Vincent Vandeghinste, Caro Brosens, Margot Janssens and Thierry Declerck (2022) WordNets? SignNets! (abstract) Presented at the 32nd Meeting of Computational Linguistics in The Netherlands (CLIN 32), Tilburg, the Netherlands.

- Ineke Schuurman, Thierry Declerck, Caro Brosens, Margot Janssens, Vincent Vandeghinste and Bram Vanroy (accepted) Are there just Wordnets or also SignNets? Global WordNet Conference 2023, Donostia-San Sebastian. Basque Country (Spain)

- Luis Chiruzzo, Euan McGill, Santiago Egea Gómez, Horacio Saggion. Translating Spanish into Spanish Sign Language: Combining Rules and Data-driven Approaches. LoResMT@COLING 2022: 75-83 (https://aclanthology.org/2022.loresmt-1.10.pdf)
- Shaun O'Boyle, Elizabeth Mathews, Davy Van Landuyt, Frankie Picron, Rehana Omardeen, Lorraine Leeson, Rachel Moiselle, Aoife Brady, Jorn Rijckaert, Caro Brosens, Anthony Ventresque, Ellen Rushe, Irene Murtagh, Andy Way, Dimitar Shterionov (2022). Using co-creation to develop sign language machine translation technologies (Abstract). Poster presentation at SCI:COM 2022, Dublin, Ireland.
- Frank Fowley, Ellen Rushe and Anthony Ventresque (2022). "A Data Augmentation and Pre-processing Technique for Sign Language Fingerspelling Recognition". Irish Machine Vision and Image Processing Conference (IMVIP)
- Frank Fowley and Anthony Ventresque (2021). "Sign Language Fingerspelling Recognition using Synthetic Data". 29th Irish Conference on Artificial Intelligence and Cognitive Science (AICS)

The original intention was to also publish the abstracts of our scientific publications on acadeafic.org. However, one of the editors informed us that the intention of the website is rather to publish a vlog in a sign language (with accompanying summary in English) about the research or a publication, which is more than just an abstract.

In 2022, some consortium members attended several academic events in which they gave poster presentations, organised or attended workshops, or gave a lecture (***OO2.8. Organising demonstrations, conferences and workshops***). An overview is given below:

Event	Date	Location	Description
NITS2022	13 May, 2022	Groningen, the Netherlands	Tim Van de Cruys (KU Leuven) gave an overview of the SignON project in the Network of Interdisciplinary Translation Studies in the Netherlands and Flanders.
Interparliamentary Committee of Taalunie in the Flemish Parliament	16 May, 2022	Brussels, Belgium	Catia Cucchiarini and Jorn Rijckaert explained the SignON Project at the Interparliamentary Committee of Taalunie in the Flemish Parliament to raise awareness about sign language technology and its challenges, and

			how the Flemish community can contribute to this.
EUD General Assembly 2022	26 May, 2022	Marseille, France	EUD's Project Officer Davy Van Landuyt gave a presentation about the SignON project at the General Assembly of the EUD, where different representations of European National Deaf Associations were present.
EAMT2022	1-3 June, 2022	Ghent, Belgium	At the 23rd annual meeting of the European Association for Machine Translation, the presentation "Sign Language Translation: Ongoing Development, Challenges and Innovations in the SignON Project" was made by leaders of the SignON consortium.
CLIN32	16 June, 2022	Tilburg, the Netherlands	The 32nd Meeting of Computational Linguistics in the Netherlands has a special track on Language technology for Dutch Sign Language (NGT) and Flemish Sign Language (VGT), where five presentations and two posters were given by project partners.
LREC2022	20-25 June, 2022	Marseille, France	At the 13th edition of the Language Resources and Evaluation Conference, the SignON consortium gave three presentations.
SLTAT2022	24 June, 2022	Marseille, France	At the Seventh International Workshop on Sign Language Translation and Avatar Technology: The Junction of the Visual and the Textual (SLTAT 2022), Ruth M. Holmes, Ellen Rushe, Frank Fowley and Anthony Ventresque gave the presentation "Improving Signer Independent Sign Language Recognition for Low Resource Languages"

SignON workshop at the European Parliament	28 September, 2021	Brussels, Belgium	At the invitation of the non-Attached Member of the European Parliament, Ádám Kósa, the SignON project had the opportunity to organise a workshop in the European Parliament on the 28th of September, 2022. We presented the technological advances achieved in the project to date as well as the social benefit and impact on the deaf, hard of hearing and hearing stakeholders. Read our press release (https://signon-project.eu/wp-content/uploads/2022/09/SignON-EP-Press-release.pdf).
27th International Conference on Applications of Natural Language to Information Systems	June 15-17 2022	Valencia, Spain	In the context of WP4, UPF-TALN team researched on how to inject linguistic information to deep neural models to boost translation performances. As a result, a conference paper was produced and published in NLDB2022. The research and the most remarkable findings were presented by Santiago Egea Gómez (UPF) in front of an expert audience on Computational Linguistics.
LoResMT@COLING 2022	October 16, 2022	Gyeongju, Republic of Korea (online)	COLING 2022 hosted a workshop on machine translation for low resource languages. Work on research done at UPF into rule-based data augmentation strategies as input to transformer-based neural machine translation between Spanish and Spanish Sign Language (LSE) was presented. Paper presented by Euan McGill (UPF).
ISGS2022	July 13-15, 2022	Chicago, United States	Rachel Moiselle and Lorraine Leeson gave a poster presentation on their scientific publication about depiction as a driver of new terminology in Irish Sign Language in 9th International Society for Gesture Studies in Chicago.

SO3 - Raise positive attitudes about and foster engagement with SignON

This strategic objective mainly focuses on improving the mindset of our target groups, especially the deaf signers, towards sign language technology. Given that, in the past (and, indeed, contemporaneously), many projects were/are implemented without the involvement of the deaf signers, DHH people often associate sign language technology with something bad or threatening. Because of COVID-19 measures, many operational objectives to build a constructive dialogue between the researchers and the target groups could not be implemented in the first project year. In the second project year, there is some visible improvement. In fact, the SignON consortium was invited by Dr. Ádám Kósa, non-attached member of the European Parliament, to organise a workshop in Brussels at the European Parliament. We also used that opportunity to invite representatives of the European Union of the Deaf, national deaf associations and/or sign language centres to attend the workshop with several lectures from the consortium (***OO3.2. – Actively entering into dialogue with representatives and organisations***). Following the lectures in the morning, we organised two parallel workshops in the afternoon: (i) VGTC invited the deaf representatives to attend a workshop in the afternoon on the topic "how can we improve our scientific communication to your deaf communities?". It was a very productive co-creation workshop in which a lot of feedback, input and ideas were given for the coming year. A relationship with these local organisations for deaf signers was established. And (ii) a workshop with a more technical focus where the other participants could exchange ideas on the sustainability of SignON. In addition, we have also entered into an active dialogue with Nederlands Gebarencentrum (Dutch Sign Center) and the Irish deaf community for cooperation in organising co-creation events, for example the ThinkIN session and "All the World's A Screen", a shakespeare performance in Irish Sign Language for people and machines (https://signon-project.eu/co-creation/co-creation-events/).

These are rather a priority for 2023 as we will then be able to work with more demo material (in other words, we can show a workable application with a functioning sign language avatar). We are still continuing to run our "SignON Forum" (https://signon-project.eu/publications/other-publications/) series hoping to engage digitally with deaf signers. Unfortunately, there is little response to it, except one: Liesl Deforche from Flanders shared her question and opinion. It was answered by Jorn Rijckaert, communications coordinator of the SignON project (https://vimeo.com/773875981)

In addition, our consortium members actively attended several academic events and networked with other researchers outside of the SignON consortium (**OO3.3. Actively entering into dialogue with research and innovation groups**). A working point, already signalled to the SignON consortium from the beginning, was that few deaf researchers from the Deaf Studies domain are involved in our operation (and see D9.1 which raises this as an ethical consideration for work in this area). Meanwhile, we still maintained contacts with Dr. Maartje De Meulder. She was interviewed by us, and she gave a lecture at the European Parliament with our consortium. In addition, a deaf linguist, Prof. Dr. Christian Rathmann, a member of our Advisory Board, is co-editing a book "Sign Language Machine Translated" together with consortium members Prof. Andy Way, Prof. Lorraine Leeson and Dr. Dimitar Shterionov. Jorn Rijckaert, communications coordinator of VGTC, was asked to write a chapter on scientific communication about sign language technology, together with Dr.Shaun O'Boyle and Prof. Elizabeth Matthews (Dublin City University). Since the SignON project is a good practice of how deaf sign language researchers (both within and outside the consortium) are strongly involved in its operation, the authors want to conduct a small-scale survey in this chapter to investigate what deaf signers expect from the communication of sign language technology researchers, and will outline some recommendations for upcoming projects. We also note that there are now two additional DHH team members working at TCD (Dr. David Loughrey and Ms Lianne Quigley) and they will be contributing to the work on documenting DHH peoples' concerns around AI/MTSL, which will help us document concerns of DHH people and how these can be resolved via communication and engagement with teams like SignON.

SO4 - Align visions between project partners internally

Cooperation between deaf and hearing researchers, especially in the case of sign language technology, is and remains a challenge. Therefore, this strategic objective strongly adopts the family strategy. In addition to a first face-to-face meeting on June 15-16, 2022DATE in Tilburg, several internal seminars were organised (**OO4.1. Raising awareness about the deaf and sign language communities among project partners**):

- March 28, 2022: "Introducing Sign Languages. Simultaneity, multimodality and other characteristics" by Myrian Vermeerbergen (KUL) and Lorraine Leeson (TCD)
- May 9, 2022: "Depiction in Irish Sign Language" by Rachel Moiselle (TCD)
- July 1, 2022: "SciComm and SignON" by Shaun O'Boyle (DCU)
- October 19, 2022: "Describing the Lexicon of a Sign Language" by Caro Brosens (VGTC)

- November 7, 2022: "Signer Independent Sign Language Recognition" by Ruth Holmes (UCD)

Regular (digital) gatherings and meetings create a strong unity among consortium members on various topics concerning sign language technology. Co-creation events with the target groups also contributed greatly to this. Co-creation events with the target groups also contributed greatly to this. The result was evident at a mid-review meeting (September 30, 2022) where consortium members, both deaf and hearing, were able to give unambiguous answers to some of the reviewers' questions and/or comments *OO4.3 - Aligning visions among different project partners*). Furthermore, there have been several local face-to-face meetings, e.g. a meeting in Leuven, a meeting in Ireland, and of course one consortium-wide face-to-face meeting in June 2022.

6. Evaluation

In this section, the strategic objectives are evaluated with the aim of (re)organising our communication and dissemination activities for the next and last (final) year of the project. The evaluation will be mainly based on input from the face-to-face consortium meeting (15th and 16th June 2022 in Tilburg), the workshop with deaf representatives (September 28, 2022 in Brussels, after the morning workshop in the European Parliament), meetings between WP6 and other WPs (especially WP7 and WP1) and internal discussions in VGTC. In doing so, we check which operational objectives have or have not been (fully) implemented. Should the operational objectives be redefined, or should additional objectives be formulated? In view of our chosen communication strategies for the target groups of the SignON project, the four strategic objectives remain unchanged.

SO1 - Increase visibility of the SignON project

The first strategic objective (SO1) has the goal of increasing visibility of the SignON project. The list below indicates the operational objectives originally outlined in our SignON Communication and Dissemination Plan (Deliverable 6.1), and whether they have been implemented or not:

No.	Description	Status
OO1.1	Design of new SignON logo	Done
OO1.2	Sign name for SignON	Done
OO1.3	Create a corporate style guide	Done
OO1.4	Create templates	Done
OO1.5	Website update	Done
OO1.6	Start-up of social media	Done
OO1.7	Introducing hashtag #signon	Done
OO1.8	Increasing reach of social media channels	Ongoing

Since we have not yet reached 13% of the quota to be achieved in terms of number of followers on social media (***OO1.8 - Increasing reach of social media channels***), the question was raised at the face-to-face consortium meeting on how to achieve the very ambitious quota. Several suggestions were made and completed by deaf representatives:

- Collaborate with organisations, including EUD, national deaf associations and sign language centres, to share our key posts on their own (online) platforms.
- Invest more in national sign languages than just International Sign. Because not everyone understands International Sign equally well and/or it feels like something "elite" (too distant from their own national sign language).
- Show some samples of our sign language avatars and show some example sentences in their national sign languages.
- Use less green key, meaning a deaf presenter in front of the green screen announcing the news, then having the background edited by a SignON template. Use more spontaneous language in presentations by deaf presenter/s and in natural settings (without green key).

The last feedback in particular is very useful as our posts that did not use green key (e.g. Announcing new SignON name sign or photos of meetings) got the most likes on social media.

Finally, to increase outreach, we need to make our communication more attractive and less "dry" (i.e. material on sign language research and technology). Provided it fits within our timing and budget, we want to ask five different well-known deaf artists (one in each country we work with) to create an artwork, funded by SignON, about sign language technology. This could be through Visual Vernacular (VV, a form of art mostly performed by Deaf artists), comedy, film or a cartoon.

SO2 - Disseminate information about and the results of the SignON project

The operational objectives of this second strategic objective mainly focus on disseminating information about and (intermediate) results from the SignON project. Although some of the operational objectives (OO2.4, OO2.5, OO2.6, OO2.7 and OO2.8) are marked with a lifetime throughout the project lifecycle, they will not be evaluated below.

No.	Description	Status
OO2.1	Announcement of the SignON project	Done
OO2.2	Setting up accessible information and communication about the project	Done
OO2.3	Making the structure and functioning of the project transparent	Done
OO2.4	Create FAQ	Ongoing
OO2.5	Communicating news and (intermediate) results about the project	Ongoing
OO2.6	Dissemination of research data and specific publications	Ongoing
OO2.7	Dissemination by (mainstream) media publications	Ongoing
OO2.8	Organising demonstrations, conferences and workshops	Ongoing

The overview below shows the quota to be achieved and how much we have achieved so far (at the time of writing on 30th November 2021):

Channel	Measure	Project target	First year	Second year	Total
Newsletter	#subscribers	200	33	10	43
Workshops by SignON	#attendees	3 workshops during the project lifecycle + 20-40 people per workshop	1	1	2
Demonstrations	#demonstrations	5 (over the lifecycle of the project)	0	0	0
Industry presentations and conferences	#presentations	12 (4 per year)	5	7	12

Scientific publications	#submitted papers	Min. 31 submitted papers for the project lifecycle (15 for conferences, 10 for workshops and 6 for journals)	8	18	26
White papers	#papers	2	0	0	0
Media publications	#publications	10	1	2	3

In the final project year, we must ensure that we achieve all the desired quotas as shown in the above table, with a special focus on demonstrations, white papers and media publications. We also need to look at how to increase our newsletter subscriptions.

SO3 - Raise positive attitude about and foster engagement with SignON

In order to implement our participation and network strategy, the following operational objectives were formulated. Four of these objectives are active for the entire project lifecycle. Only the last two objectives *(OO3.6 - PR videos about the transparent operation and cooperation and OO3.7 - Create demonstration videos on the use of SignON service)* are planned for the last year.

No.	Description	Status
OO3.1	Actively entering into dialogue with potential users	Ongoing
OO3.2	Actively entering into dialogue with representatives and organisations	Ongoing
OO3.3	Actively entering into dialogue with research and innovation groups	Ongoing
OO3.4	Preparing communication scenarios	Planned
OO3.5	Managing reactions on social media	Ongoing
OO3.6	PR videos about the transparent operation and cooperation	Planned

OO3.7	Create demonstration videos on the use of SignON service	Planned

In the coming and last year, we should mainly focus on the first operational objectives. Thus, we are still planning at least three new videos for the "SignON Forum" series, demonstrations in major events (such as World Deaf Day) in the five countries Spain, the Netherlands, UK, Flanders, Belgium and Ireland (e.g. one of these will be at an historic event hosted by the Royal Irish Academy in Dubin that will bring together academics, policy makers and community leaders from Northern Ireland (UK) and the Republic of Ireland to discuss aspects of sign languages as human rights on 24 February 2023. SignON will be very actively engaged in organising and presenting at this all-island event). Finally, we will organise one more large concluding SignON workshop (possibly two days) for all target groups in Belgium.

The fourth operational objective, to write several "scientific communication" recommendations to inspire upcoming projects on sign language technology, will be written out in a chapter for the publication "Sign Language Machine Translation" (edited by Andy Way, Dimitar Shterionov, Lorraine Leeson and Christian Rathmann) and will then be presented in an International Sign video, with English subtitles.

SO4 - Align visions between project partners internally

To achieve this fourth strategic objective, three operational objectives were formulated that were originally intended to remain unchanged until the end of the project. Since the consortium is very well aligned internally, we do not think it is necessary to focus on these anymore. Therefore, these three operational objectives are marked as completed.

No.	Description	Status
OO4.1	Raising awareness about the deaf and sign language communities among project partners	Done
OO4.2	Communication training for project partners and disseminating correct terminology about being deaf and sign language	Done
OO4.3	Aligning visions among different project partners	Done

The table below shows the quota of internal workshops to be achieved. So WP6 will not organise more internal workshops in the last year because it is not the highest priority compared to the other operational objectives of other strategic objectives, taking into account available budget and time.

Channel	Measure	Project target	First year	Second year
Internal workshops	#attendees	Min. 3 workshops	2	5

7. Communication Organisation

The above communication objectives that remain to be implemented are shown below in a schedule (the rows represent operational objectives and the columns represent the month of the project lifecycle). Only those communication objectives that must be followed up over the entire project lifecycle are coloured grey. Other communication objectives with a short lifespan are shown in blue and concern a period (first blue is the start of the communication objective and last blue is the completion).

	25	26	27	28	29	30	31	32	33	34	35	36
OO1.8												
OO2.4												
OO2.5												
OO2.6												
OO2.7												
OO2.8												
OO3.1												
OO3.2												
OO3.3												
OO3.4												
OO3.5												

OO3.6											
OO3.7											

8. Follow up, Evaluate and Adjust

It is important to realise that our communication and dissemination plan is iterative, which means that our activities must always be adapted and evolve according to the needs of the SignON project and the target groups. In the coming year (2023), biweekly meetings will continue to be organised with WP7 (coordination and management) to follow up on the communication and dissemination plan of the SignON project. We try to ensure that all strategic and operational objectives as described above are implemented by the end of the project.